

Texas Woman's University  
Courses for a major in Biology  
Leading to 8 - 12 Science Certification  
(for students graduating May, 2002 and thereafter)

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**Freshman (Fall)**

BIOL 1111 & 1113 Principles of Biology I + Lab  
CHEM 1111 & 1113 Chemical Principles I +  
ENG 1013 Composition and Literature I  
MATH 1303 Elementary Analysis I  
Vis/Perform Art (3 hrs required)

Total: 17 hrs.

**Freshman (Spring)**

BIOL 1121 & 1123 Principles of Biology II + Lab  
CHEM 1121 & 1123 Chemical Principles II + Lab  
ENG 1023 Composition and Literature II  
MATH 1313 Elementary Analysis II  
Soc./Behav. Sci (3 hrs required)

Total: 17 hrs.

**Sophomore (Fall)**

BOT 2111 & 2113 Plant Science + Lab  
CHEM 2211 & 2213 Organic Chem I + Lab  
SCI 2113 Earth Science I  
HIST 1013 History of the U.S. 1492-1865  
ENG Literature (3 hrs required)

Total: 17 hrs.

**Sophomore (Spring)**

BIOL 4221 & 4223 Ecology + Lab  
CHEM 3221 & 3223 Organic Chem II + Lab  
SCI 2123 Earth Science II  
HIST 1023 History of the U.S. 1865-Present  
Womens Studies (3 hrs required)

Total: 17 hrs.

**Junior (Fall)**

CHEM 3334 Quantitative Analysis  
BIOL 4811& 4813 Molecular & Cell Biology:  
Gene Expression + Lab  
GOV 2013 U.S. National Government  
PHYS 1131 & 1133 Principles of Physics I + Lab  
ERDB 3033 Eth. & Cult. Diff. Child

Total: 18 hrs.

**Junior (Spring)**

BACT 3111& 3113 General Microbiology + Lab  
BIOL 4821 & 4823 Molecular & Cell Biology:  
Genetics & Inheritance + Lab  
EDUC 2003 Legal, Ethical, Prof. Role & Resp.  
PHYS 1141 & 1143 Principles of Physics II + Lab  
EDUC 3001 Integrating Tech into D&I of A&I  
EDUC 3003 Learning Theory & Development

Total: 19 hrs.

**Senior (Fall)**

ZOOL 4241 & 4243 Mammalian Physiology +  
Lab  
EDUC 4001 Integrating Tech into D&I of A&I  
EDUC 4004 Design and Imp. of Assess and Inst.  
GOV 2023 Texas Government  
ECSE 4203 Learners with Exceptionalities  
ERDB 3463 Content Area Reading

Total: 18 hrs.

**Senior (Spring)**

EDUC 4102 Classroom Environment & Mgt.  
EDUC 4\_\_6 Student Teaching

Total: 8 hrs.